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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/940,114	08/27/2001	Toshimichi Nishizawa	A30603-A-1 -072595.0184	4294

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EXAMINER	
FIORILLA, CHRISTOPHER A	
ART UNIT	**PAPER NUMBER**
1731	

DATE MAILED: 03/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/940,114	NISHIZAWA ET AL.	
	Examiner	Art Unit	
	Christopher A. Fiorilla	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *9-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *9-13* is/are rejected.

7)☒ Claim(s) *14-16* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *1/2/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. Claims 14-16 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from another multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 14-16 have not been further treated on the merits.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 406051679 and the admitted prior art (pages 2-5 of the specification) in view of Valyi (5,082,604).

JP 406051679 and the admitted prior art teach the basic claimed process of manufacturing a magnet roller by injection molding a magnetic powder/binder mixture into the cavity of a mold while applying a magnetic field thereto.

JP 406051679 also discloses the magnet roller has a JIS surface roughness of 10.

JP 406051679 and the admitted prior art do not disclose the specific configuration of the injection mold. Valyi discloses an injection mold comprising a fixed mold having a cavity and a moveable mold disposed in the cavity and capable of increasing or decreasing a volume of the cavity, and discloses moving the moveable mold during injection such that the volume of the cavity is increased in accordance with the amount of injected material. Valyi also discloses that the use of this type of mold avoids defects due to shrinkage. Valyi also discloses the moveable mold moves in a lengthwise direction of the cavity against a biasing force provided by a biasing means extending in the cavity.

It would have been obvious to one having ordinary skill in the art at the time of the invention to use this type of mold in the process of JP 406051679 or the admitted prior art in view of the generic disclosure therein in order to obtain a product having reduced defects due to shrinkage.

Determination of the specific injection pressure and biasing force would have been well within the realm of routine experimentation to one having ordinary skill in the art at the time of the invention. These parameters would have obviously been selected to optimize the process conditions and/or the properties of the final product.

5. Applicant's arguments filed 12/11/03 have been fully considered but they are not persuasive.

With respect to the potential rejection of claims 9-16 under 103 applicants argued:

There is no mention in the Aoki reference of a movable mold to change the cavity volume in accordance with the amount of resin-bonded material that is injected into the

cavity in a molten state during the application of the magnetic field, as is required by the base claim 9.

This argument is not persuasive. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The examiner recognized the fact that Aoki does not teach a movable mold and cited a secondary reference to teach this limitation.

The Valyi reference, however, concerns only the molding of "common thermoplastics" (Col. 2, lines 15-19), and includes no disclosure or suggestion that the molding process disclosed would be useful with resin-bonded magnetic material as claimed by the applicant. For the reasons set out at pages 2-5 of applicant's specification, the molding of resin-bonded magnetic material presents unique problems, due to the nature of the magnet material and the presence of the applied magnetic field, that do not exist in molding common thermoplastics. The Valyi patent, therefore, neither addresses the same problems in the prior art as does the claimed invention, nor teaches a solution to such problems. Consequently, it would not have been obvious from the Aoki reference and the Valyi patent to modify the Aoki molding process as proposed in the rejection.

This argument is not persuasive.

Again, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

The problems discussed at pages 2-5 of applicants specification are not due to the presence of magnetic material or the presence of an applied magnetic field. Rather, the problems discussed are due to the flow of the molding material into the mold space. This flow problem

would result in a nonhomogeneous product (i.e. defects) whether the molding material contained a magnetic filler or not.

The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. *In re Keller* 208 USPQ 871, 881; *In re Sernaker* 217 USPQ 1. It is maintained that the combined teachings of the references would have suggested modification of the Aoki process with the Valyi apparatus to obtain a final product with reduced defects.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher A. Fiorilla whose telephone number is (571) 272-1187. The examiner can normally be reached on M-F, 6:30am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christopher A. Fiorilla
Primary Examiner
Art Unit 1731

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